



Case Study

AYURVEDIC MANAGEMENT OF ANXIETY INDUCED INSOMNIA

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ABSTRACT

The extremely busy lifestyle has significantly impacted both the physical and mental health of individuals. Discussing mental health remains a stigma in society, profoundly affecting individuals' psyche. A male patient reported to the outpatient department with symptoms of anxiety, over thinking, disturbed sleep, body ache, fatigue, poor digestion, and frequent headaches for the past ten months. His score on the Hamilton Anxiety Rating Scale (HAM-A) was 30, indicating moderate to severe anxiety, and his score on the Pittsburgh Insomnia Severity Index (PSQI) was 17, classifying him as a poor sleeper. The patient underwent 42 days of Ayurvedic treatment, which included *Panchakarma* therapy and internal medications. The *Panchakarma* therapy consisted of *Abhyanga* with *Matra Basti*, *Shirodhara*, and *Pratimarsha Nasya* using *Bala Ashwagandhadi* oil. The internal medications included *Manasmitra Vataka*, *Chitrakadi Vati*, and *Kalyanak Ghrita*. After 42 days of treatment, the patient's HAM-A score decreased to 11, and the PSQI score dropped to 6. The patient reported a renewed sense of well-being and enthusiasm for work after a long time.

INTRODUCTION

Generalized anxiety disorder is a mental health condition that causes persistent fear, worry, and a continuous sense of being overwhelmed. It is marked by excessive, ongoing, and unrealistic anxiety about everyday situations which could be multifocal such as finance, family, health, and the future.^[1] The anxiety and anxiety-related disorders are the most common mental disturbances worldwide, with a 12-month prevalence of 14% among persons aged 14 to 65.^[2] Due to their high prevalence, chronic nature, and comorbidity, the World Health Organization (WHO) ranks anxiety disorders as the ninth leading cause of health-related disability.^[3] The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), provides detailed criteria for diagnosing generalized anxiety disorder.^[4] The exact cause is unknown but it is believed that noradrenergic, serotonergic, and other neurotransmitter systems appear to play a role in the body's response to stress.

Insomnia is commonly associated with anxiety disorders. Approximately 60–70% of patients with generalized anxiety disorder (GAD) and panic disorder report significant sleep disturbances^[5] which deleteriously effect daytime functioning and negatively effects quality of life.^[6] Recent research suggests a bidirectional relationship where symptoms of psychiatric disorders, including anxiety-related disorders, lead to disturbed sleep. Conversely, disturbed sleep, may increase the risk of developing anxiety disorders.^[7] The conventional treatment of anxiety disorder includes cognitive behavioural therapy and pharmacotherapy including: Selective serotonin reuptake inhibitor (SSRI) and serotonin-norepinephrine reuptake inhibitor (SNRI), Benzodiazepes, pregabalin, Buspirone.^[8] Insomnia is an underrated and often unrecognized comorbidity, with patients seldom reporting it to physicians. However, its significant impact on increased morbidity underscores the necessity for separate treatment approaches. Complementary and alternative medicine (CAM) use can be seen extensively among patients with mental disorders, commonly for managing depression or insomnia.^[9] Common CAM therapies for insomnia include Ayurveda, acupuncture, melatonin, acupressure, yoga, tai chi, and mind-body practices.^[10] In this case, the patient's management strategy prioritized addressing insomnia as a primary concern

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alongside anxiety. In this case, the patient underwent treatment involving Panchakarma therapies alongside internal medication.

Patient Information: A 46-year-old male from the upper middle class, working as a software engineer in a prestigious company, presented to the Panchakarma outpatient department accompanied by his wife. He reported experiencing excessive worry, over thinking, extreme restlessness, palpitations, severely disturbed sleep, body aches, and fatigue for the past ten months. These issues, rooted in a lifelong tendency to over think, worsened after his father's death a year ago, causing emotional and financial strain due to internal family matters. Initially, his concerns about managing financial losses disrupted his sleep. Over time, his sleep disturbances intensified, leading to decreased focus and impacting his work capacity. He also began experiencing episodes of palpitations and restlessness in response to minor stressors. Although he sought treatment at two allopathic clinics, he discontinued

medication after 15-20 days due to impatience and societal stigma associated with anti-anxiety drugs. Additionally, he reported poor digestion and frequent headaches (1-2 times weekly). He consumes alcohol once or twice a week and smokes 3-4 cigarettes daily for the past 10-12 years. He has also been diagnosed with hypertension for the past two years and is currently on antihypertensive medication.

Clinical findings: When the patient first reported to the outpatient department the following clinical findings were noted. Pallor, icterus, cyanosis, and oedema were not present. His BMI was 26, blood pressure was 152/96mmHg and pulse rate was 94/min. He was sweating profusely and fidgeting his lower limbs continuously during the history taking. The *Dasvidha Pariksha* (ten-fold examination) revealed: *Vata-Pittaja Prakriti, Vataja Vikriti, Madhyama Sara-Samhanan, Avara Satva-Satmya, Madhyama Vyayama Shakti, Madhyama Ahara, and Vyayama Shakti, Madhyama Bala.*

Table 1: Timeline of development of symptoms

Time	Development of symptoms	Other relevant developments
May 2023	The symptoms began with over thinking about financial losses and emotional disturbance due to his father's demise, leading to sleep disturbances.	
July 2023	His blood pressure was increasing (averaging 150/90mmHg) despite taking regular antihypertensive medication (telmisartan 20mg once a day).	He consulted a general physician for his elevated blood pressure, and the medication dosage was adjusted, with an additional medication prescribed. The new regimen included telmisartan 40mg once a day and metoprolol 50mg once a day.
October 2023	He began experiencing extreme restlessness and episodes of palpitation, leading to significantly poor sleep quality and a notable decline in work efficiency.	
December 2023	The symptoms continued to worsen over time.	He consulted a physician for his issues and was diagnosed with general anxiety disorder. The physician prescribed anxiolytic drugs, including Escitalopram 10mg once a day and clonazepam 0.25mg at bedtime.
11 March 2024	The symptoms continued to worsen over time.	The patient visited the outpatient Panchakarma Department of the college. Proper examination and assessment were conducted, and findings were noted before initiating treatment. The treatment commenced on March 12, 2024.

Diagnostic Criteria: The patient's assessment was based on the Hamilton Anxiety Rating Scale for anxiety disorder and the Pittsburgh Sleep Quality Index for sleep quality. The scores are compared in Table No.3.

Therapeutic Intervention: The patient received treatment consisting of *Abhyanga, Shirodhara, and Pratimarsha Nasya*, along with internal medications. After a period of forty-two days, the patient's improvement in HAM-A and PSQI scale was reported, as shown in Table No. 2.

Table 2: Timeline of therapeutic intervention

Time	Panchakarma intervention	Oral medicines	Clinical Assessment
12 March 2024			Before treatment findings
12 March 2024 - 25 march 2024 (14 days)	<i>Sarvanga Abhyanga (Bala-ashwagandhadi Oil)</i> with <i>Swedana (Dashmoola Kwath) Matra Basti (Bala-ashwagandha oil)</i>	Tablet <i>Manasmitra Vataka</i> – 250 mg. twice a day after meal with lukewarm water. <i>Chitrakadi Vati</i> 500mg twice a day after meal with lukewarm water in morning and night	After treatment findings (AT 1) HAM-A score PSQI score
26 march 2024 - 8 April 2024 (14 days)	<i>Shirodhara (Bala-ashwagandhadi oil)</i>	Previous medicines + <i>Kalyanaka Ghrita</i> – 5 ml. twice a day with milk in morning and night	After treatment findings (AT 2)
9 April 2024 - 22 April 2024 (14 days)	<i>Pratimarsha Nasya (Bala-Ashwagandhadi oil)</i>	Same oral treatment continued-	After treatment findings (AT 2)

RESULTS: The changes in HAM-A scale and PSQI scale after forty-two days of treatment are shown in table no.3

Table 3: Before and after treatment comparison on HAM-A and PSQI scale

S.No.	Symptoms	Before treatment (12/3/2024)	After treatment 1 (25/3/2024)	After treatment 2 (8/4/2024)	After Treatment 3 (22/4/2024)
HAM-A Scale					
1	Anxious mood	3	3	2	2
2	Tension	3	2	1	1
3	Fears	1	1	1	1
4	Insomnia	3	2	1	1
5	Intellectual	3	2	1	0
6	Depressed mood	2	2	1	1
7	Somatic (muscular)	2	1	1	0
8	Somatic (sensory)	2	2	1	1
9	Cardiovascular symptoms	2	2	1	1
10	Respiratory symptoms	2	2	1	1
11	Gastrointestinal symptoms	1	1	1	0
12	Genitourinary symptoms	1	1	0	0
13	Autonomic symptoms	3	2	1	1
14	Behaviour at interview	2	2	1	1
	Total	30	25	14	11
PSQI Scale					
1	Subjective sleep	3	2	2	1
2	Sleep latency	3	2	2	2
3	Sleep duration	3	2	1	1
4	Sleep efficiency	3	2	1	1
5	Sleep disturbances	2	1	1	0
6	Sleep medication	0	0	0	0
7	Daytime dysfunction	3	2	1	1
	Total	17	11	8	6

DISCUSSION

The aim of the treatment was not only to address anxiety but also to improve sleep and general well-being of the patient with the widely practiced and proved therapies and medicines for the addressed problems. The HAM-A score was reduced from 30 to 11 and PSQI score changes from 17 to 6.

Abhyanga (Ayurvedic massage) involves massaging the body with *Sneha* in seven postures. In this case, the massage was carried out with *Bala-Ashwagandhadi* oil for about 45 minutes, including a foot massage. *Abhyanga* alleviates *Vata*^[11], reduces fatigue, and promotes sleep. Foot massage, in particular, is known to enhance sleep quality^[12] and reduce fatigue. Its stress-reducing effects have been documented in previous studies.^[13] The patient reported a decrease in body ache and fatigue, along with improved sleep, after following this procedure.

Matra Basti (unctuous enema) is giving unctuous enema in small amount (75ml) through rectum. It helps in getting good sleep.^[14] *Matra Basti* is shown to have effects on anxiety, insomnia.^[15,16,17] Here, 75ml of *Bala-Ashwagandhadi* oil was inserted daily after taking afternoon meal.

Shirodhara (Therapeutic pouring of medicated liquid in forehead) involves the gentle dripping of liquid onto the forehead at a consistent pace and temperature. In this case, *Shirodhara* was performed with *Bala-Ashwagandhadi* oil for one hour in the morning around 10 am. *Shirodhara* is known to reduce stress levels and positively impact mood. Its effects are akin to those observed after deep meditation and alert relaxation, as documented in previous EEG studies, where it increases the alpha rhythm and decreases beta activity. Studies have been conducted establishing its role in insomnia.^[18,19] In the present case, the patient reported experiencing a calm state of mind during the therapy, and they also fell asleep during the session.

Pratimarsha Nasya (medication through nasal route) involves the administration of a small amount (2 drops) of medication through the nose. Its role is described as promoting good sleep.^[20] The role of *Pratimarsha Nasya* is well established in general anxiety and sleep.^[21,22] Here, the patient self-administered 2 drops of *Bala-Ashwagandhadi* oil through the nasal route at bedtime for fourteen days.

Bala-ashwagandhadi oil of *Nagarjuana* Pharmacy was used. This oil is indicated for all *Vata* disorders.^[23] the key ingredients of oil are *Bala* (*Sida cordifolia*), *Ashwagandha* (*Withania somnifera*), *Laksha* (*Laccifer lacca*), sesame oil. The extracts of *Sida cordifolia* roots are shown to have CNS depressants, anxiolytic and sedative properties by decreasing serum cortisol levels.^[24,25] *Withania somnifera* extracts are found to exert positive effects on sleep, anxiety and general well-being by involving GABAergic modulation.^[26] The

use of *Balaashwagandhadi* oil in massage, *Nasya*, and *Basti* is a common practice, and it is known for its role in improving sleep and alleviating debility.^[27]

Manasmitra Vataka is a compound formulation indicated especially in psychological disorders, improving memory, intellect.^[28] This medicine is in use for conditions like anxiety, insomnia, poor memory and other psychological conditions and is found effective in improving these conditions.^[29,30]

Chitrakadi vati improves metabolic fire and promotes digestion.^[31] The tablet was prescribed to the patient to improve his appetite, as he reported poor digestion.

Kalyanak Ghrita is a medicinal preparation of herbs with cow ghee, indicated for psychological disorders.^[32] The medicine's lipophilic nature enhances its accessibility to the central nervous system, making it widely used in practice for neurological and psychological disorders. Its effects have been demonstrated to improve cognitive deficits in children.^[33] Its neuroprotective and nootropic actions have been proven in Wistar rats.^[34] The action may be attributed to the properties of the drugs present in this formulation. Many of the ingredients, such as *Prunus avium*, *Phyllanthus emblica*, and *Hemidesmus indicus*, have demonstrated neuroprotective action, while *Cryptolepis dubia*, *Curcuma longa*, *Rubia cordifolia*, and *Embelia ribes* have shown antioxidant effects.^[35]

CONCLUSION

Psychological disorders and their treatment are addressed in detail in Ayurveda. By following the basic principles of Ayurveda, the mental well-being of patients can be significantly enhanced. In this case, the patient reported a sense of well-being and improved scoring in HAM-A and PSQI scale after forty-two days of treatment and regained confidence in both his personal and professional life. Addressing insomnia separately can greatly benefit patients, as it can exacerbate the severity of symptoms in anxiety-related disorders. The domain of Ayurvedic treatment in mental health deserves further exploration, as it is crucial in the current context.

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